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AUTHOR	Blum, Zahava D.; Coleman, James S.
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ABSTRACT

This analysis of the differences between black and nonblack males in the processes underlying occupational growth uses retrospective life history data and studies the degree to which members of the two groups convert educational attainment into income and prestige, as well as the effects of parental resources in determining educational levels. The analysis showed that blacks attained lower levels than nonblacks both in income and prestige, principally as a result of lower growth rates rather than substantially lower starting points. There is a relatively small continuous effect of education on income, slightly smaller for blacks than for nonblacks, but high incomes for blacks are less stable than for nonblacks. Black and nonblack distribution of prestige remain in the same relative position. The analysis shows that the father's education and occupation and the mother's education all show independent effects on the son's educational attainment. For blacks and mother's education is of greater importance than the other two background characteristics, while among nonblacks the three characteristics are of approximately equal weight. There is a much stronger relationship between the occupation of father and that of son for nonblacks than for blacks. (Author/MBM)

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LONGITUDINAL EFFECTS OF EDUCATION ON THE INCOMES AND OCCUPATIONAL PRESTIGE OF BLACKS AND WHITES

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Zahava D. Blum

James S. Coleman

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The Johns Hopkins University

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STAFF

John L. Holland, Director

James M. McPartland, Assistant Director

Virginia Bailey

Thelma Baldwin

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Mary Viernstein

Murray A. Webster

Barbara J. Williams

Phyllis K. Wilson

ABSTRACT

Retrospective life history data is used in this analysis to examine differences between black and nonblack males in the processes underlying occupational growth. The investigation consists primarily of studying the degree to which members of the two groups convert educational attainment into occupational returns in the form of income and prestige throughout a portion of their occupational careers. In addition, the differential effects of parental resources in determining educational levels are examined.

The analysis shows several differences between the black and nonblack samples in occupational growth. First, the levels attained by blacks are lower than those for nonblacks, both in income and prestige. These lower levels are principally a result of lower growth rates of income and prestige, rather than substantially lower starting points. In analyzing income growth, it is found that there is a relatively small continuous effect of education on income, slightly smaller for blacks than for nonblacks. However, for blacks the positive effects of education are eroded by unmeasured factors which make high incomes less stable than for nonblacks, and lead them to regress back toward a mean. The overall effect is an increase in nonblack income relative to black with a reduction in the overlap of the two distributions.

The process underlying growth in occupational prestige is somewhat different. First, the continuing effects of educational levels are somewhat larger than in income; again, these effects are slightly greater for nonblacks than for blacks. However, occupational prestige of blacks is more stable than that of nonblacks. The effect of education and the greater regression effect seem to balance each other, with the result that the black and nonblack distributions of prestige remain in the same relative position.

Finally, the analysis shows that father's education, father's occupation, and mother's education all show independent effects on the son's educational attainment. For blacks, mother's education is of greater importance than the other two background characteristics, while among nonblacks, the three characteristics are of approximately equal weight. The direct effects of these factors, on both income and prestige growth, are minimal when the son's own education is controlled. The exception to this is the direct effect of mother's education on income of blacks, an effect which continues throught the portion of the career investigated here.

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Introduction

There are many sources of difference in the occupational careers of blacks and whites in the United States. Some of these arise from the different experiences and backgrounds which blacks possess upon entering the labor market: the characteristics of the families in which they grow up (including their father's occupation and both parents' education) and their own characteristics (including lower levels of education and less familiarity with the occupational structure). Aside from differences in starting point, there may be differences as well in the processes through which occupational achievement is gained--the mechanisms of occupational growth. This paper addresses itself to the processes or mechanisms of occupational growth in the careers of blacks and whites. The practical value of such a research endeavor can obviously be great, for understanding these processes of occupational growth can give clues to how the conditions confronting blacks might be modified in order to bring about greater occupational opportunity.

The whole matter might be put another way. A comparison of the cluster of economic, social and political resources which defines an individual's place in our society shows that the average black possesses many deficits compared to the average white. In addition, the average black may be handicapped by an inability to maximize the returns on assets which he already possesses, i.e., to convert present assets into additional resources.[1] For example, if one examines occupational mobility from father to son for blacks and whites, there is a striking difference: there is a much stronger relationship between the occupation

of father and that of son for whites than for blacks. The resources inherent in a father's high-status occupation are less fully converted into son's occupational status for blacks than for whites. Table 1, from research conducted by Blau and Duncan, illustrates this. The sons of higher white collar blacks are only slightly more likely than the sons of craftsmen to become higher white collar themselves (10.4% as compared to 8.8%). Among nonblacks, however, the sons of higher white collar fathers are twice as likely to become higher white collar as are the sons of craftsmen (54.3% to 28.1%).

This lack of convertibility of parental resources into occupational resources for the son's generation reflects itself in the low incomes of black families. However, in addition to the lower incomes of blacks as a result of their location in the occupational distribution, blacks and whites with similar education and in similar occupations have been shown to have quite different incomes.

Why the difference? What is it that reduces for blacks the convertibility of their parental background and their own educational resources into occupational status and economic resources? Providing some information about these questions is the goal of this paper.

The inferences concerning resource conversion made above, and most discussions of black-white differences, have been based on cross-sectional data, or at best, on data for two of the time points in the lives of individuals. However, in order to empirically discover differences in the underlying mechanisms and processes, it is necessary to examine occupational histories. This is a task which has not been

Table 1. Mobility from Father's Occupation to Son's 1962 Occupation; Percent Distribution by Race, for Men 25 to 64 Years Old, Whose Occupation Is White Collar *

Father's Occupation	Non-Negroes		Negroes	
	Higher White Collar	Lower White Collar	Higher White Collar	Lower White Collar
Higher white collar	54.3	15.3	10.4	9.7
Lower white collar	45.1	18.3	14.5	9.1
Higher manual	28.1	11.8	8.8	6.8
Lower manual	21.3	11.5	8.0	7.0
Farm	16.5	7.0	3.1	3.0
Not reported	26.0	10.3	2.4	6.5

*From Toward A Social Report (1969), p. 24. Data are from research originally conducted by Peter M. Blau and O. D. Duncan (1967), table unpublished in original publication. Occupation classification based on combinations of census major occupational groups: Higher white collar: professional and kindred workers, managers, officials, proprietors, except farm. Lower white collar: sales, clerical and kindred workers. Higher manual: craftsmen, foremen, and kindred workers. Lower manual: operatives and kindred workers, service workers, and laborers, except farm. Farm: farmers and farm managers, farm laborers and foremen. Classification by "father occupation" includes some men reporting the occupation of a family head other than the father.

carried out. No extensive longitudinal studies of intra-generational mobility have been conducted by sociologists or by economists.[2] Understandably, there are major difficulties inherent in following an individual throughout his occupational career, or even through a significant portion of it.[3]

It is possible to obtain some indication of changes over a career by examining different age groups in a cross-sectional study, as for example, in the use of data from a single decennial census. However, the use of such data for this purpose is attended by a serious shortcoming: the age groups being compared differ not only in age; they differ as well in the historical period during which they reached a given age. For example, males who were 40 years old in 1960 were a different population of 25-year-olds in 1945 than are the males who are 25 years old in 1960. Thus to infer changes from age 25 to 40 by comparing men who are 25 in 1960 with men who are 40 in 1960 is invalid. For example, the mean educational attainment of the latter cohort is more than one additional year for whites and two additional years for nonwhites.[4]

Retrospective occupational histories, collected from a single cohort, can facilitate such a study of changes within a lifetime. This type of data also contains methodological problems. These problems are primarily two: first, errors of recall in reporting past events or statuses and second, the fact that the cohort represents a particular historical population, and its experiences are a joint result of the conditions of that historical period and general factors associated

with a given age but independent of a historical period. The first of these problems can be empirically examined by a comparison with known information at selected points in time such as census data. The second problem can be reduced by considering more than one cohort, to determine what is common to, and what is different in, their patterns of occupational change. When only one cohort is used, as will be done in this paper, the resulting description is a valid statement of occupational history for that historical group. It is only the extent to which one can generalize from that occupational history to other groups which remains in question.

The data on which this paper is based are retrospective life histories collected from one age cohort in the population: men who reached the ages of 30 through 39 in 1968. The analysis is based on national samples of nonblack and black men of this age group.[5] Throughout the analysis, the principal comparisons will be the nonblack and the black samples.

The first methodological question, that of the reliability of the recalled data, has been examined in some detail elsewhere;[6] it is sufficient to say here that recall of occupation does appear reliable on the basis of tests against published data which should be comparable. Most comparisons, however, are only in the aggregate; individual reliability may be low and this may decrease many of the correlations. Some comparison data, such as that from the Blau-Duncan study, will allow a direct comparison of correlations.

The second problem, generalization beyond the single cohort, can-

not be dealt with because of the absence of other cohorts in this study. In particular, it may well be that in the past few years, occupational opportunities for blacks in the United States have changed in ways that would make this analysis invalid as a description of a cohort currently age 20. This must be recognized as a limitation of the present study--but a limitation that is inherent in the fact of social change.

Growth in occupational position can be studied from several points of view. There are a number of dimensions by which occupation may be characterized, and it is possible to study change in each of these dimensions. The two most important, in what is ordinarily considered "occupational mobility," are the <u>income</u> produced by the occupation and the <u>prestige</u> or <u>status</u> of the occupation. These are important in part because they are important to individuals: they seek to maximize, for themselves and their families, access to goods and services available in the society. The way in which income facilitates this access is straightforward and does not need further justification.[7] In the case of prestige, however, further explanation is necessary. First, it is worth inquiring what we mean by "prestige" or "social standing." Occupations in any society with a division of labor are differentially "looked up to," and a distinct gradation of respect or deference develops. The prestige associated with a specific role in the occupational structure becomes a resource of the incumbent of that role. Universally, incumbents of high prestige occupations have greater access to goods and services in the society than do those of lower pres-

tige occupations.

The origins of a prestige hierarchy need not be discussed here. It should be noted, however, that prestige as a dimension of occupations has a number of unique attributes which would justify its study. First, there is extremely high correspondence between the rank orderings of occupations both among different subgroups within the United States and in cross-cultural comparisons.[8] These orderings have also been shown to be invariant over time, with respect to the subgroup of the population attributing ratings, the type of instructions given to raters in ranking occupations, and respondents' interpretation of the general notion of "prestige" or "social standing."

While quantitative studies of the prestige of occupations have existed for over forty years, ratings have generally been available for only a small number of occupational titles.[9] It is only recently that prestige ratings have been available for all Census occupational titles.[10] As a result of the availability of these ratings, no interpolations are necessary.

The present analysis will examine both income and prestige as two important dimensions of occupational growth. In both cases, the emphasis will be on the social standing and the economic resources available to the individual as a result of his employment in full-time occupations. Thus, focus is on the prestige and wage and salary earnings of black and nonblack males.[11]

Occupational Growth in Income

The growth of income over the portion of the lifetime covered by our research is shown in Figure 1 for both black and nonblack samples. This graph shows an increasing divergence between nonblack and black male income, from nearly the same point at the earliest age to a difference of almost $2,000 by the latest age. The ratios of mean income in the black sample to income in the nonblack sample decline steadily with age from .959 at age 15 to .711 at age 37.[12] The sources of this divergence constitute part of the focus of this inquiry: Why do the incomes of the black sample rise so much more slowly than incomes in the nonblack sample?

The changes over age shown by Figure 1 contain two different components, and it is important to distinguish these.[13] First, in the earliest ages, the set of persons with full-time occupations is a small and nonrandom subset of the total age groups. For the nonblacks, only 10% and 27% of the sample at ages 15 and 17 reported full-time earnings for a period of 4 months or more; and for the blacks, the comparable percentages were 16% and 36%. These early entrants into the labor force are those with the lowest education; the more highly educated enter the labor force later. Since the better educated constitute a higher proportion of the nonblack sample than of the black, this changing mix in the labor force increases the gap between nonblack and black income.

In sum, only a part of the increasing gap between black and nonblack incomes is due to an increasing gap between incomes of the same

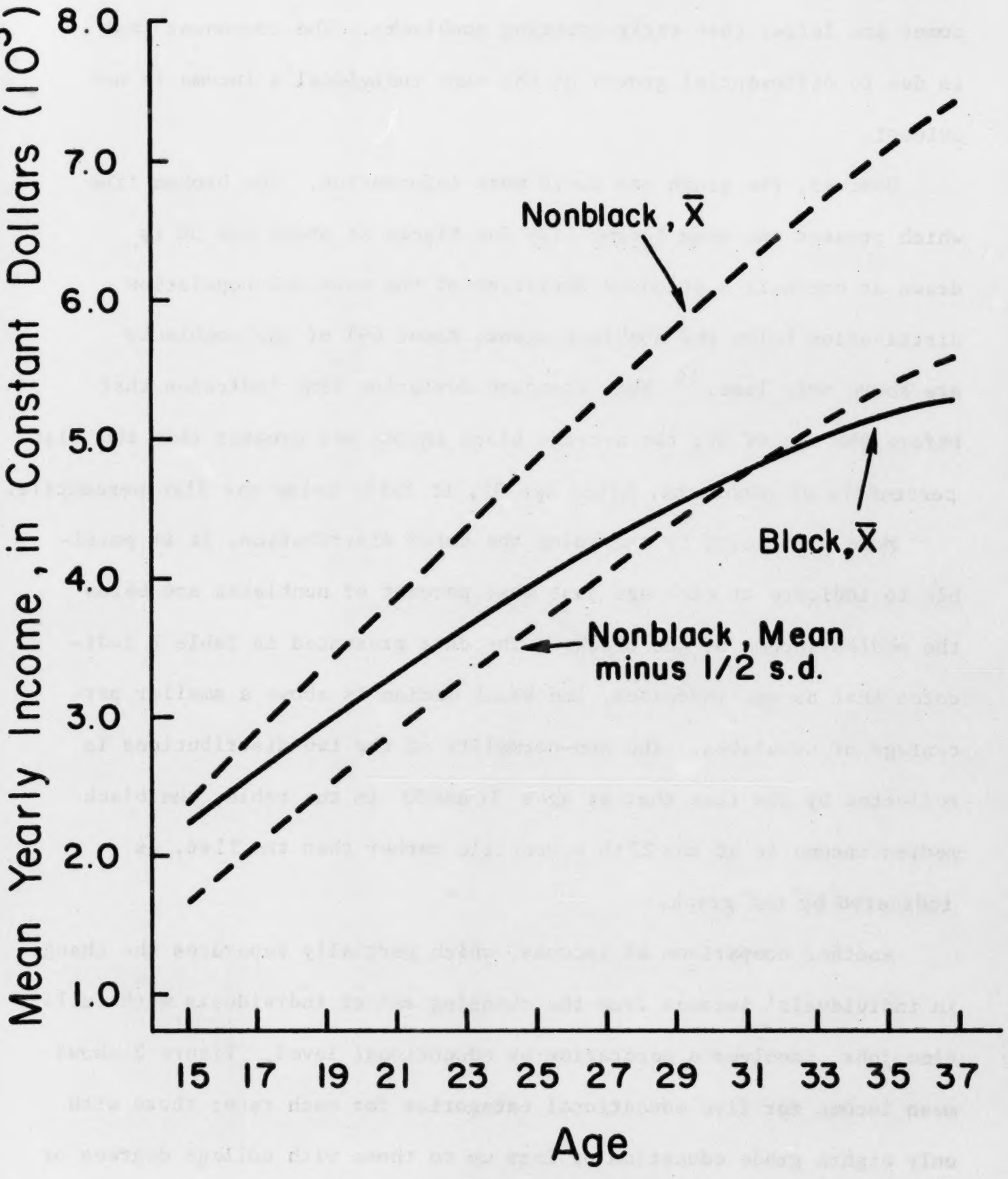

Figure 1. Mean Yearly Income in Constant Dollars, by Age, for Black and Nonblack Men.

individuals; part is due to the late entrance of nonblacks whose incomes are larger than early-entering nonblacks. The component that is due to differential growth of the same individual's income is not evident.

However, the graph can yield more information. The broken line which crosses the mean income line for blacks at about age 32 is drawn at one-half a standard deviation of the nonblack population distribution below the nonblack means. About 69% of the nonblacks are above this line.[14] This standard deviation line indicates that before the age of 32, the average black income was greater than the 31st percentile of nonblacks. After age 32, it falls below the 31st percentile.

More precisely, by examining the total distribution, it is possible to indicate at each age just what percent of nonblacks are below the median income of the blacks. The data presented in Table 2 indicates that as age increases, the black median is above a smaller percentage of nonblacks. The non-normality of the two distributions is reflected by the fact that at ages 31 and 33 in the table, the black median income is at the 27th percentile rather than the 31st, as indicated by the graph.

Another comparison of incomes, which partially separates the change in individuals' incomes from the changing set of individuals with full-time jobs, involves a separation by educational level. Figure 2 shows mean income for five educational categories for each race: those with only eighth grade education or less up to those with college degrees or more.[15] The Figure shows that for those at the lowest educational level

Table 2. Percentile Position of the Median Black Income on the Nonblack Income Distribution, by Age

Age	Percentile of Black Median on Nonblack Income Distribution	Black Median Income (Dollars)
17	39.9	2216
18	33.7	2424
19	35.3	2736
20	35.4	2836
21	32.0	2919
22	30.9	3229
23	30.4	3340
24	31.8	3548
25	30.3	3707
26	29.7	3922
27	31.2	4032
28	28.9	4118
29	29.0	4252
30	28.3	4419
31	26.8	4512
32	28.1	4654
33	26.6	4813
34	23.5	4779
35	24.3	5015
36	26.0	5078
37	23.1	5124

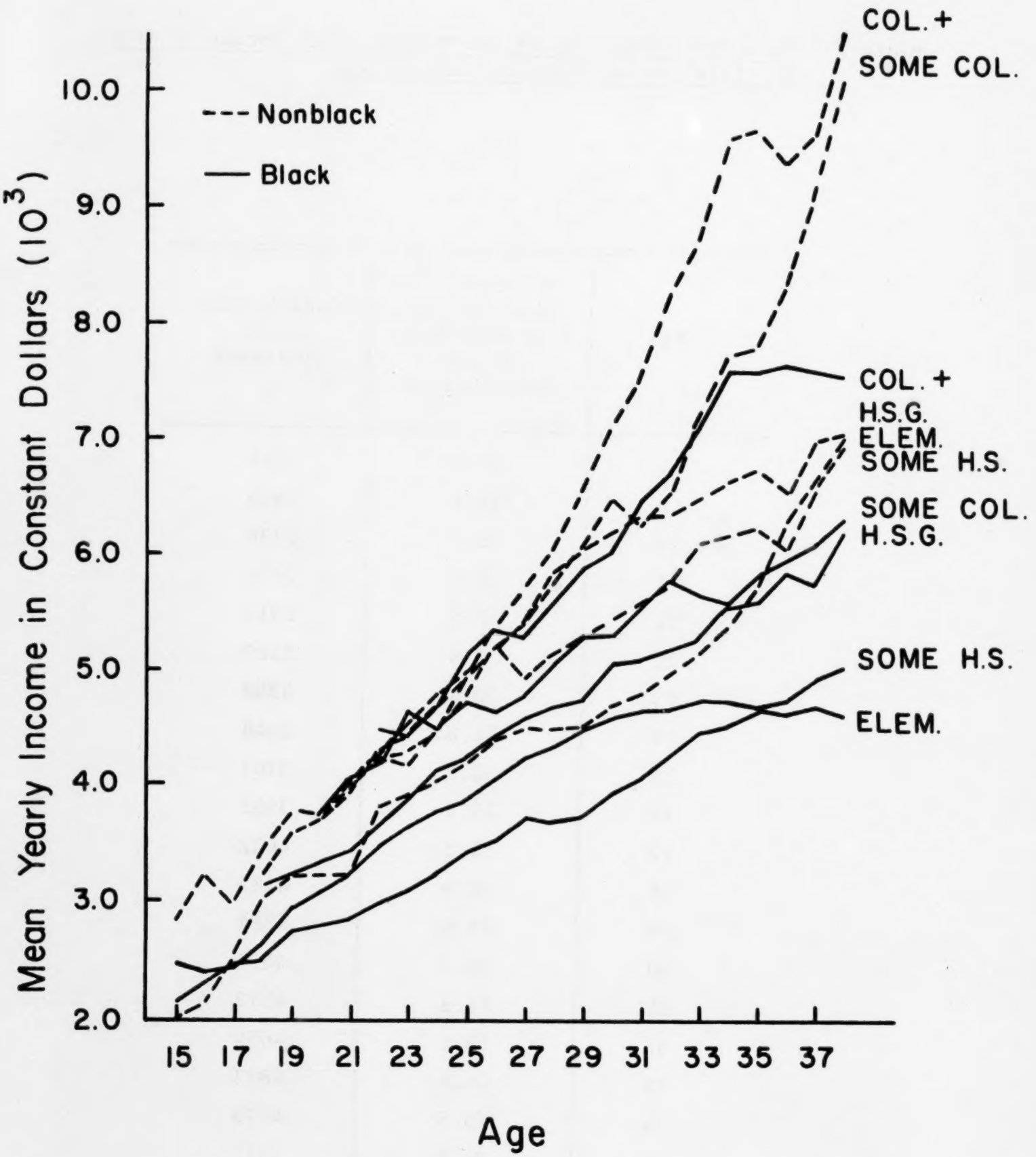

Figure 2. Mean Yearly Income in Constant Dollars, by Educational Attainment at Various Ages, for Black and Nonblack Men.

the racial difference in mean income from age 23 on is roughly constant (and the ratio of mean incomes is roughly constant over even a larger range). This is not true, however, for those with highest education. The nonblacks increase in income far more rapidly than do the blacks. Thus it appears that the differential income growth occurs most among those at higher educational levels. This means that the increasing differences shown in Figure 1 are also due to the faster income growth of the late-entering highly-educated nonblacks than of the late-entering highly-educated blacks.

The relation of education to income growth among blacks and nonblacks can be shown more systematically by examining, at each age, the regression of income on education. This gives a measure of the apparent effect of education upon income at each age. Linear regressions of income at each age (for ages 19, 20, 21, ..., 38) on educational attainment at that age were carried out for the black and nonblack samples.[16] The resultant regression coefficients are presented in Figure 3. Comparing these coefficients shows that starting from age 23, at which time most respondents have completed both education and military service, the nonblack sample shows a rather regular increase in regression coefficients of about .004 per year, while the black sample shows a small but steady decline of about .001 per year. Education appears to have a greater effect on income for the blacks than for the nonblacks in the early years, but a lesser effect in the later years. Stated differently, education appears to have its effect for blacks in establishing initial differences in earning

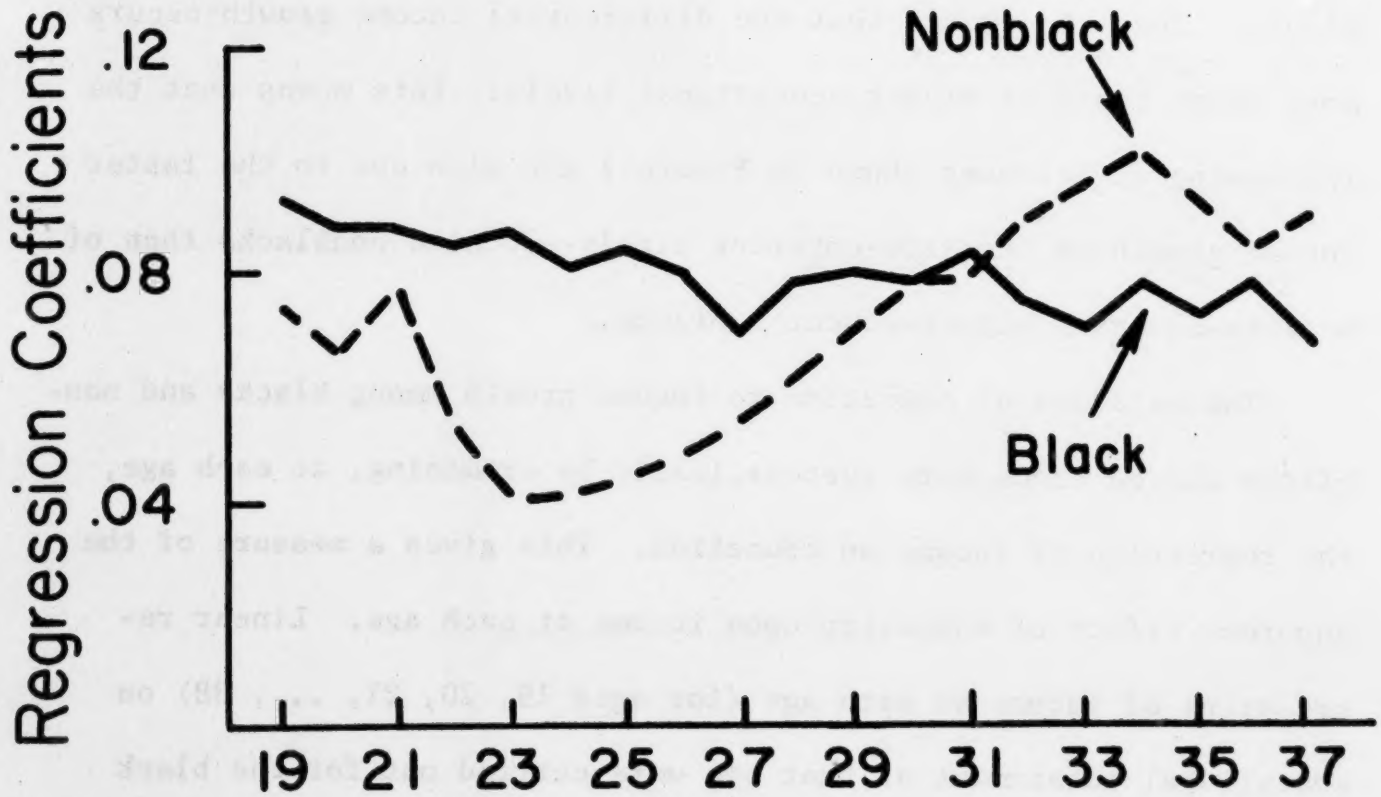

Figure 3. Regression Coefficients from Regressions of Respondent's Income (log) on Education, by Age, for Black and Nonblack Men.

levels. For nonblacks education has less effect in establishing initial difference in earnings levels, but a stronger effect in determining later rates of income growth. This is also evident in Figure 2,which shows narrow differences in income at age 21 for the whites relative to the wide differences at age 37, while the major differences for the blacks are already evident at age 21, and do not increase much later.

In discussing the components which make up the observed differences between nonblack and black income, we have alluded to the fact that individuals enter the labor force at varying times. It is, therefore, meaningful to ask if the differential entry points contribute to the differences in the effects of education on income. Put another way, to what extent does labor force experience affect income? The regression coefficients presented in Figure 4 give a partial answer to this question. Figure 4 plots the regression coefficients for experience from a linear regression of income at various ages on both education and experience. In measuring experience, we counted all years in the labor force whether income was known or not. In addition, years spent in the Armed Forces were included as labor-force experience. Examination of these coefficients indicates, in general, that the amount of labor force experience has a positive effect on income. However, the effects are quite small, and greater for nonblacks than for blacks. For most of the ages examined (14 out of 19), the coefficients for blacks are not statistically significant; on the other hand, those for nonblacks are significant (12 out of 19). Thus there is some indication

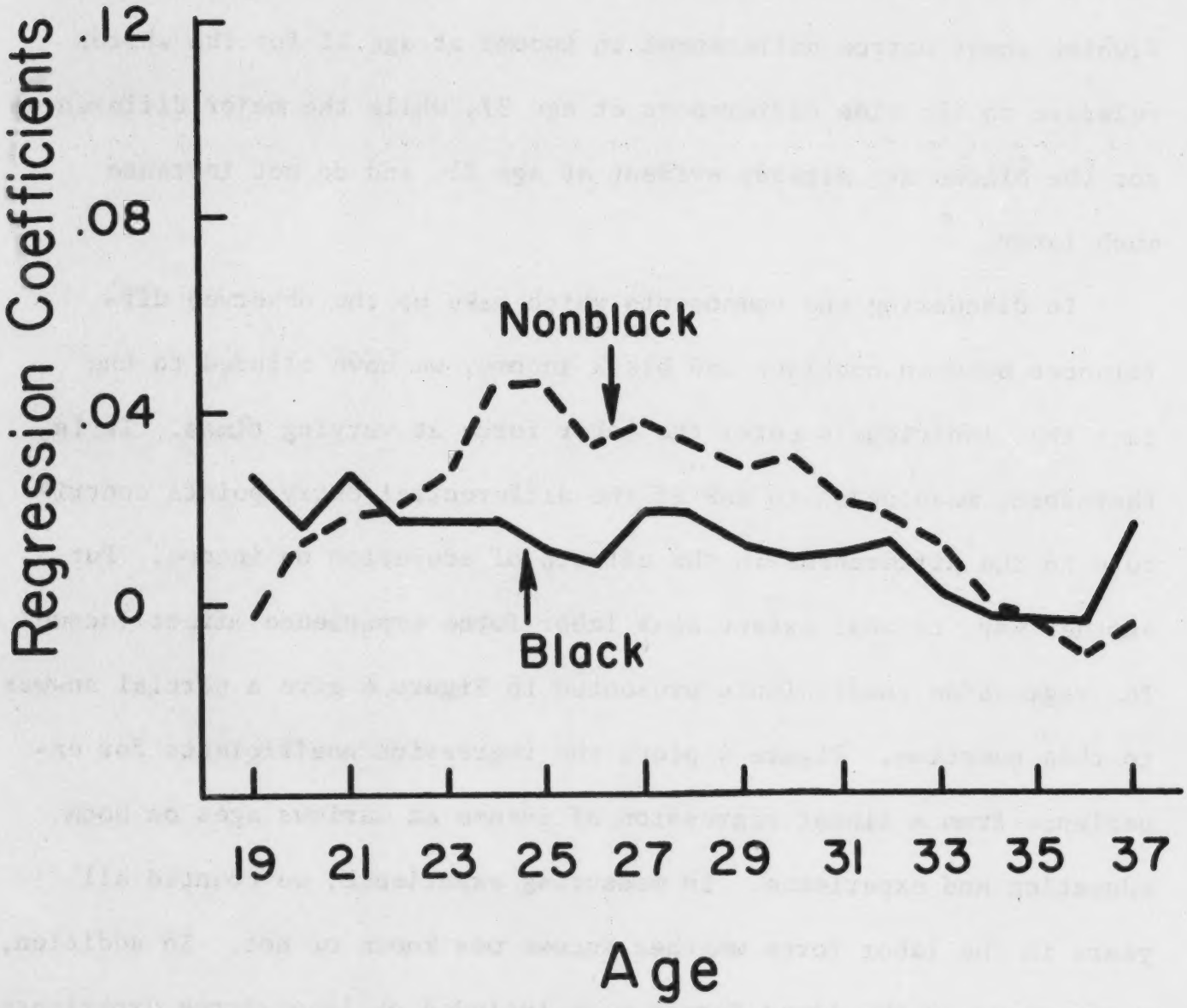

Figure 4. Regression Coefficients of Years of Experience from Regressions of Income (log) on Education and Years of Experience in the Labor Force, by Age, for Black and Nonblack Men.

of a small positive effect of experience for nonblacks, and a less certain indication of an even smaller positive effect for blacks.[17]

Thus far, the analysis has treated the data as consecutive cross-sections of the same population. A profitable manner in which to view the process of income growth for blacks and nonblacks is to examine the dependence of one year's income on that of a previous year. The greater the dependence, the greater the stability of an individual's income. Figure 5 summarizes the results from regressions of income at a given age on income one year earlier, for both samples. The interpretation of these raw regression coefficients is this: if the regression coefficient is .845 as in the black sample at age 33, this means that for a 10% differential in income between two individuals at age 32, the expected differential in income at age 33 is 8.45%. If the coefficient were 1.0, this would mean that for a 10% income differential at age 32, the expected income differential at age 33 would be 10%. A regression coefficient of income on prior income will be higher under two conditions: as the income is more <u>stable</u> from one year to the next, and as the ratio of higher incomes to lower ones increases with increases in age. The standardized regression coefficient separates these two interpretations: a standardized regression coefficient in a lagged regression will be higher as the income is more stable.

At most ages (13 out of 19), both the regression coefficient and the standardized regression coefficient for nonblacks is greater than that for blacks, indicating that income is somewhat more predictable from prior income for nonblacks than for blacks. However, these dif-

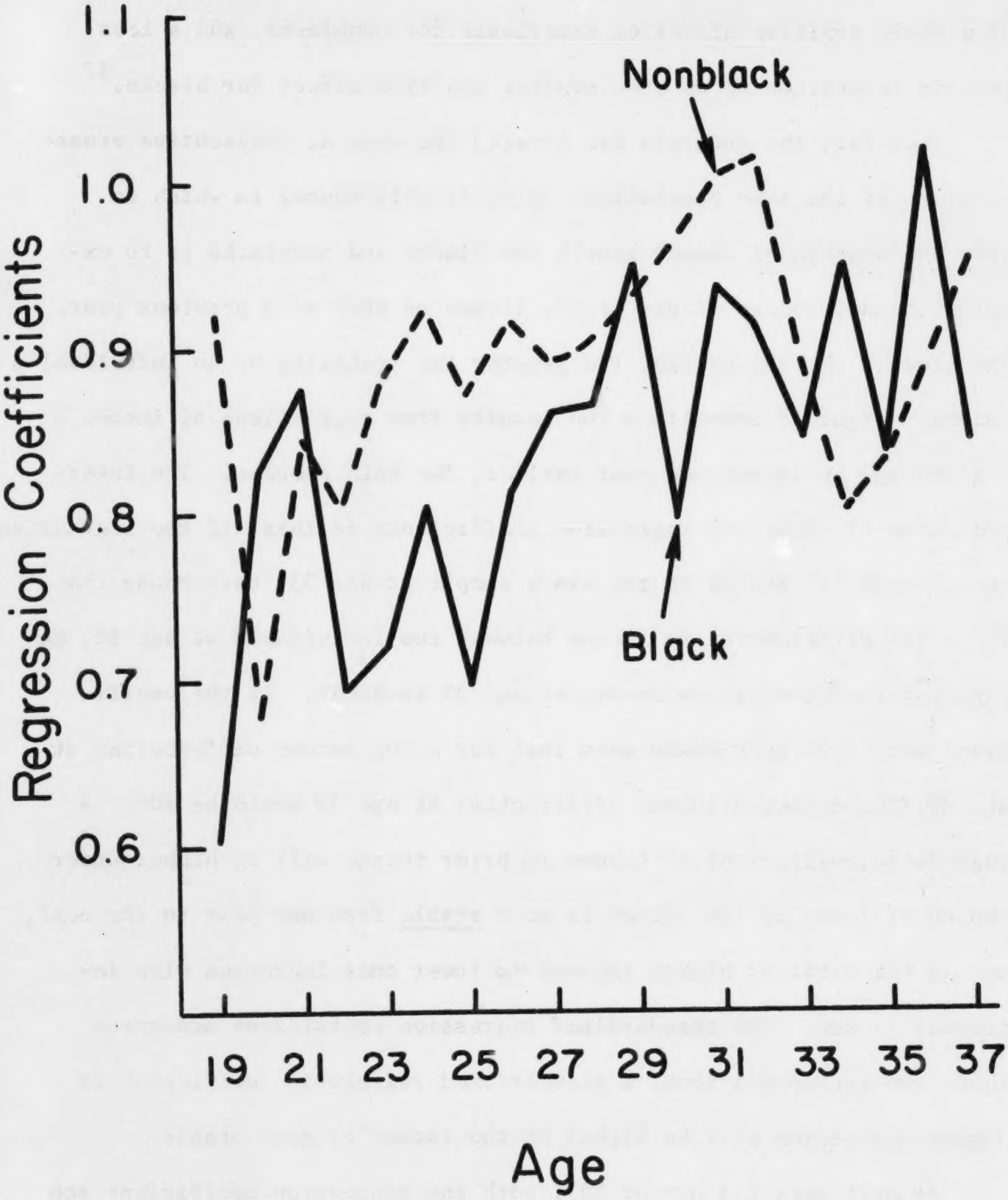

Figure 5. Regression Coefficients from Regressions of Respondent's Income (log) at a Given Age on Income (log) One Year Earlier, for Black and Nonblack Men.

ferences are not large.

The effectiveness of education in increasing income at later ages (in contrast to its effect on income at time of entry to the labor force) may be seen by regressing current income on both prior income and education. If the effect of education is only on the income at entry, then education should have a negligible regression coefficient when prior income is controlled; if its effect is on growth in income, then it should show a sizeable regression coefficient at all ages. A positive regression coefficient for education when prior income is included is a measure of the effect of education on <u>increment</u> in income at that age; a positive coefficient when prior income is not included is merely a measure of education's overall effect on the level of income at that age.

Figure 6 shows the regression coefficients of education for the black and nonblack samples for each age. There are no consistent trends for either sample, and neither is consistently above the other. The regression coefficients are small and with one exception, positive for both samples. For the nonblacks, the positive regression coefficients are consistent with the earlier results, which showed an increasing effect of education on the <u>level</u> of income, from age 23, or a continuing effect of education on the <u>growth</u> in income. For the blacks, however, the earlier results indicated an effect of education on income near the time of entry, and very little additional effect on growth of income (see Figures 2 and 3).

Thus, our earlier discussion seems inconsistent with the regression

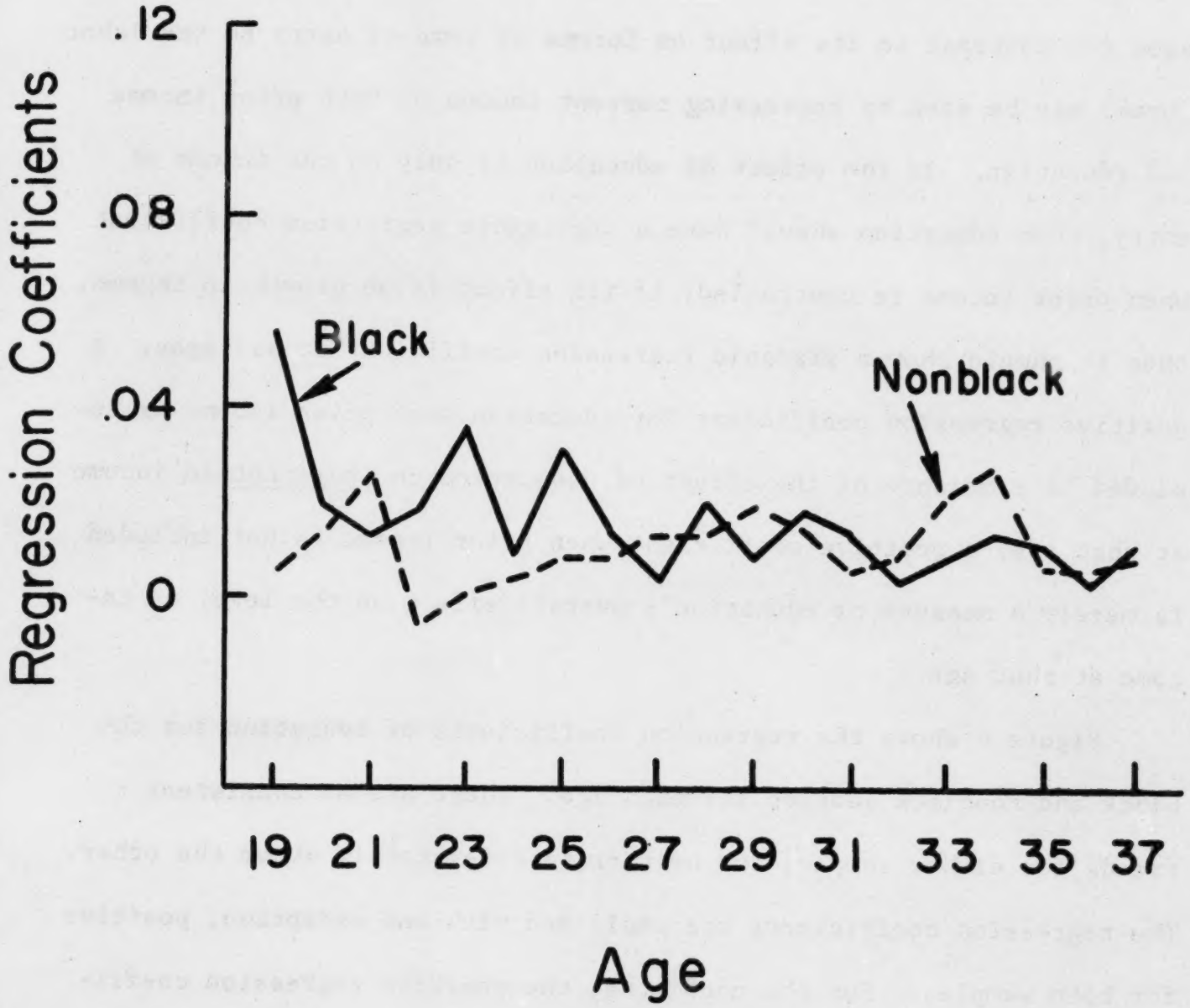

Figure 6. Regression Coefficients of Education from Regressions of Respondent's Income (log) at a Given Age on Education at the Same Age and Income (log) One Year Earlier, for Black and Nonblack Men.

coefficients in Figure 6, which show a steady incrementing effect of education, no less for blacks than for nonblacks. The other independent variable in these regressions, prior income, does indicate a difference: the effect of prior income is less for blacks than for nonblacks.

What this means is that, contrary to inferences from Figures 2 and 3, education does have for blacks about the same continuing effect on incrementing income as for nonblacks. The lesser effect of prior income means that the end result of education is merely to maintain the income differential, as shown in Figure 2, rather than expand it. For blacks, there is a greater tendency for high incomes to regress back toward lower levels, as shown by the lower regression coefficients for prior income; thus the effect of education is used up in maintaining the income differentials which existed at earlier ages.

The extent to which black and nonblack incomes regress toward the mean can be seen by a simple comparison. At every age, for both distributions two means may be calculated: the mean of those above the overall mean of the distribution at that age, and the mean of those below it. Then for both of these subgroups, the average gain or decline in income the next year can be calculated. Because of the tendency to regress toward the mean, the expectation is, if there is no trend, that the high group will decline and the low group will increase. The greater the regression toward the mean, the greater the increase of the low group and decrease of the high group. If there is a general trend toward increasing income, as is true here, this should

simply displace all figures upward.

Figure 7 shows the percentage increase or decrease of those below and above the means, for the black and nonblack samples. First, the graph indicates that the general upward trend is great enough that even those above the mean increase rather than decrease. Second, the differences between blacks and nonblacks is in those above the mean only: the nonblack increase, for those above the mean, is about twice that of the black. Blacks and nonblacks below their respective means increase by about the same percentage. The increase is high at early ages and declines in later ages. This decline is another expression of the increased stability of income of later ages, shown in Figure 5.

The black-nonblack difference shown in Figure 7 indicates that the greater instability of income among blacks than nonblacks is for those with higher-than-average incomes. The incomes of the black above-average earners grow by about 2% per year; those of the nonblacks by about 4% per year.

Another way of examining these racial differences is to turn to the structural equations for change in income, i.e., differential equations. If income is represented by I and education (which will be assumed exogenous) by E, then the differential equation is:

$$\frac{d \log I}{dt} = a + b_1 \log I + b_2 E \qquad (1)$$

The estimates of coefficients in this equation for the two groups are:[18]

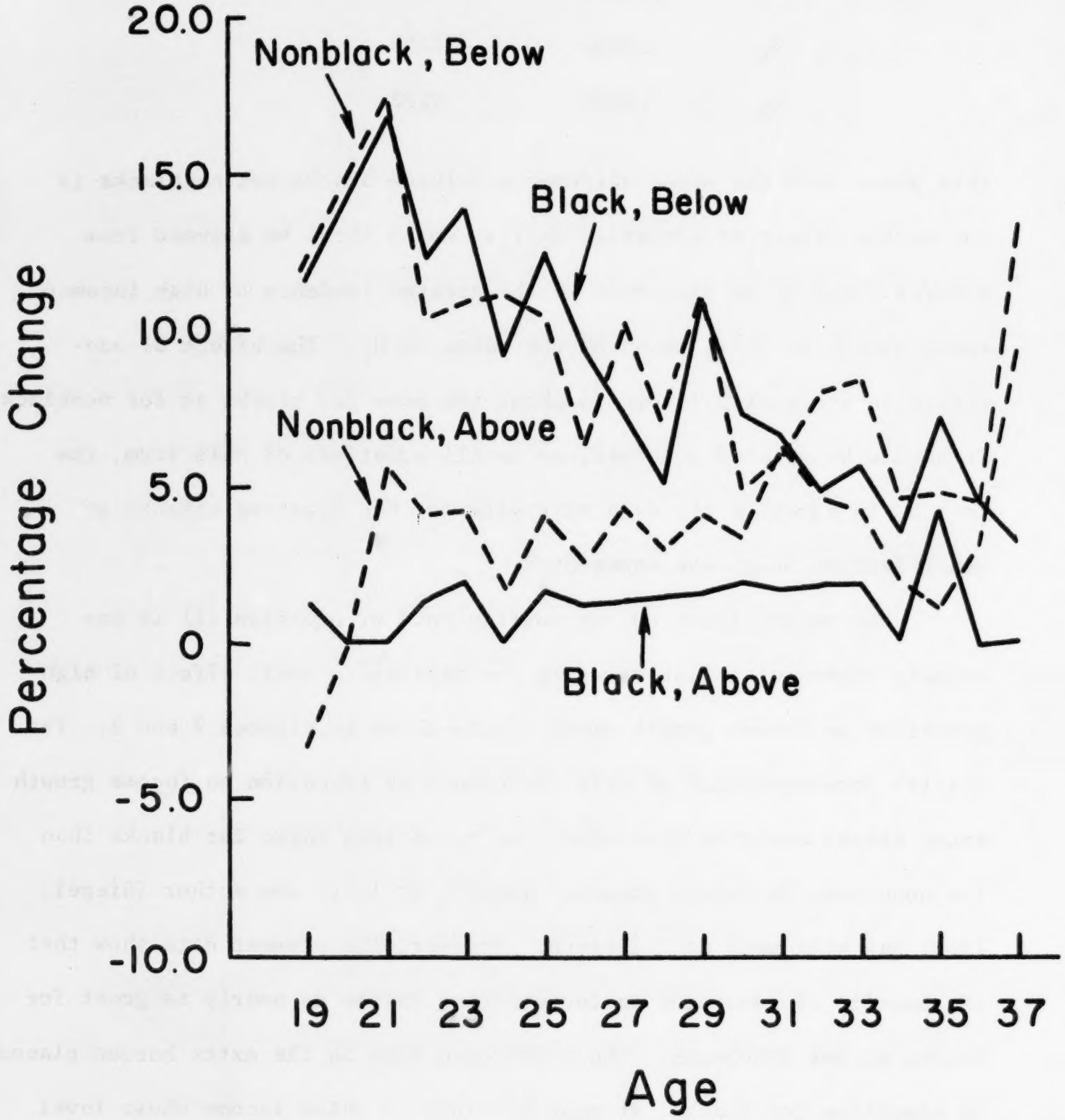

Figure 7. Percentage Change in Yearly Income from One Year to the Next for Individuals Classified as Above or Below the Mean the Previous Year, by Age, for Black and Nonblack Men.

	Blacks	Nonblacks
a	1.5824	1.0819
b_1	-.2046	-.1290
b_2	.0199	.0128

This shows that the major difference between blacks and nonblacks is not in the effect of education (b_2) as would first be assumed from Figures 2 and 3; it lies more in the greater tendency of high incomes among blacks to fall, shown by the value of b_1. The effect of education in increasing income is about the same for blacks as for nonblacks. It should be pointed out that, as in all equations of this form, the term b_1 in equation (1) is a surrogate for the negative effects of other factors which are unmeasured.

The result shown by the coefficients of equation (1) is extremely important in interpreting the apparently small effect of high education on income growth among blacks shown in Figures 2 and 3. The initial interpretation of this low effect of education on income growth among blacks would be that education is of less value for blacks than for nonblacks in income growth. Indeed, at least one author (Siegel, 1965) has made such an inference. However, the present data show that the benefit of education in incrementing income is nearly as great for blacks as for nonblacks. The difference lies in the extra burden placed on education for blacks: it must continually raise income whose level is being eroded by other factors not measured here, but whose effect is shown by the lower stability of income for blacks than for nonblacks.

The discussion thus far has focussed only on two characteristics of the respondent: his educational attainment and his previous income. However, in the initial discussion, differences were indicated between blacks and nonblacks in the convertibility of parental resources into current assets. Our data contain a number of measures of these resources: father's education, mother's education and the prestige of father's occupation (reported for the time when the respondent was 14). Analyses including these parental factors, as well as the respondent's own education, have been carried out. The results indicate that in the prediction of income at a given age, only one of these factors, mother's education, has a substantial effect.

Figure 8 shows the standardized regression coefficients for mother's education on income (in an equation including father's education, father's occupational prestige, and own education). The figure shows that for nonblacks the effect of mother's education declines rapidly and vanishes beyond the early years. For blacks, however, the effect of mother's education remains about the same at the later ages as at the earlier ones. This suggests a special importance of mother's education for the occupational careers of blacks, a stronger role than it plays for nonblacks.

The absence of effects of other resources of the prior generation, such as father's education and father's occupation, does not mean these factors have no effect . It means that any effects occur largely through education or something highly correlated with education. Examination of these effects will be carried out shortly. First, however, it is useful to examine growth in occupational prestige.

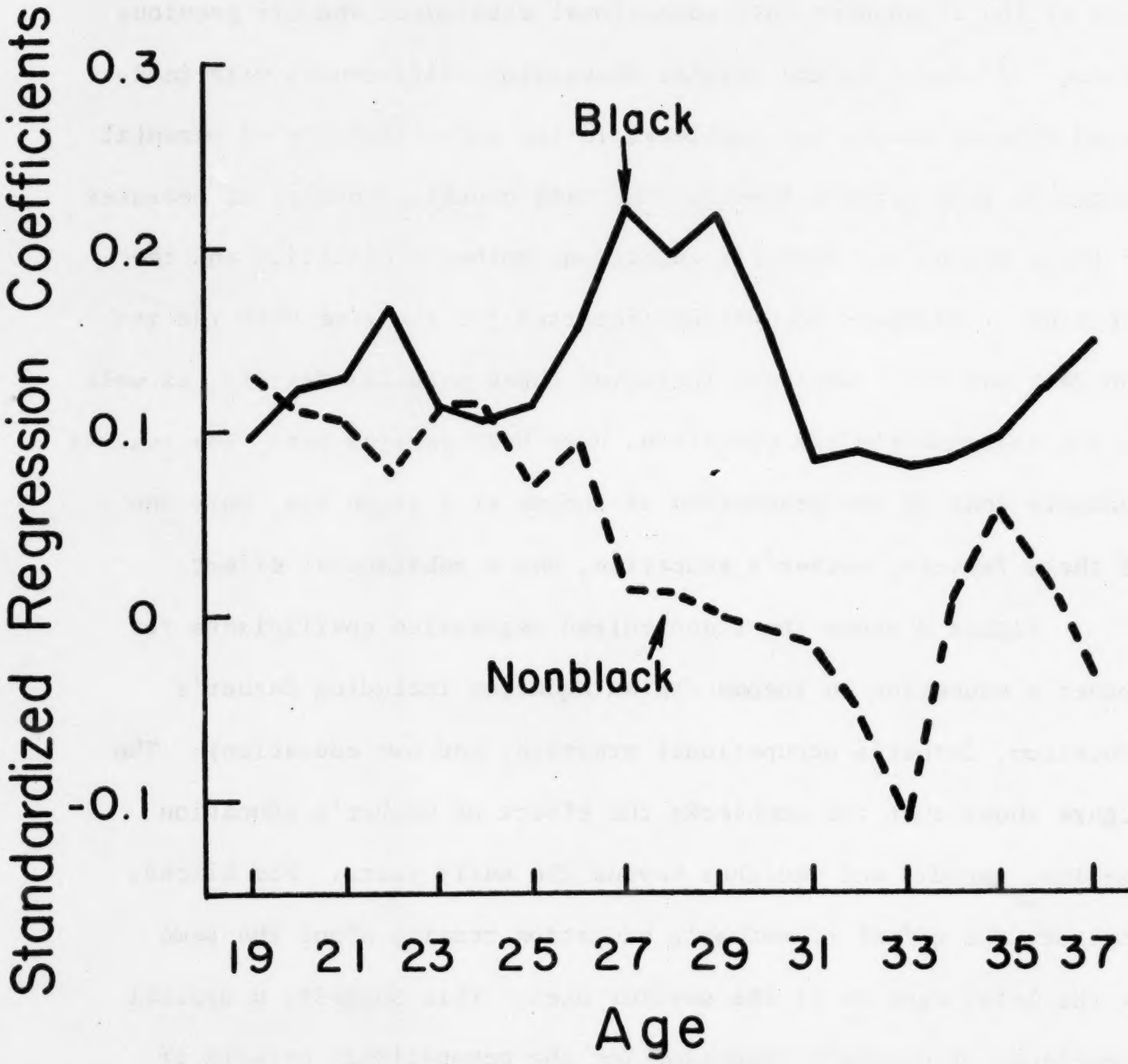

Figure 8. Standardized Regression Coefficients for Mother's Education from Regression of Respondent's Income (log) at Age (N), Age on Father's Education, Mother's Education, Father's Occupational Prestige and Respondent's Education at Age (N), for Black and Nonblack Men.

Growth in Occupational Prestige

As suggested in the introductory comments, occupational prestige probably constitutes the dimension of occupation which individuals seek most to increase, apart from income. Consequently, the growth in occupational prestige over a lifetime represents an important measure of occupational achievement.

Figure 9 shows growth in mean occupational prestige for blacks and nonblacks who were in the full-time labor force at each age.[19] As with the curves of income growth, growth for both blacks and nonblacks includes two components: changes in occupational prestige for a given individual from the time he entered the labor force until the age of interview, and the higher occupational prestige of those who enter the labor force later. In short, this graph includes the same confounding of two factors that was evident in the graph of income growth from age 15 to 37, shown in Figure 1.

Paralleling the discussion of income, it is useful to see where the prestige of the average black lies at each age on the nonblack distribution. The lower of the two broken lines in Figure 9 has been drawn to join points which are one-half of a standard deviation of the nonblack distribution below the nonblack means, i.e., at the 31st percentile. This line lies <u>above</u> the black average prestige line for every age after age 19. Thus, roughly (that is, assuming normal distributions), the prestige of the average black is below the 31st percentile of nonblacks for all ages after 19. This result is in constrast to his position in income where the average black was above the 31st

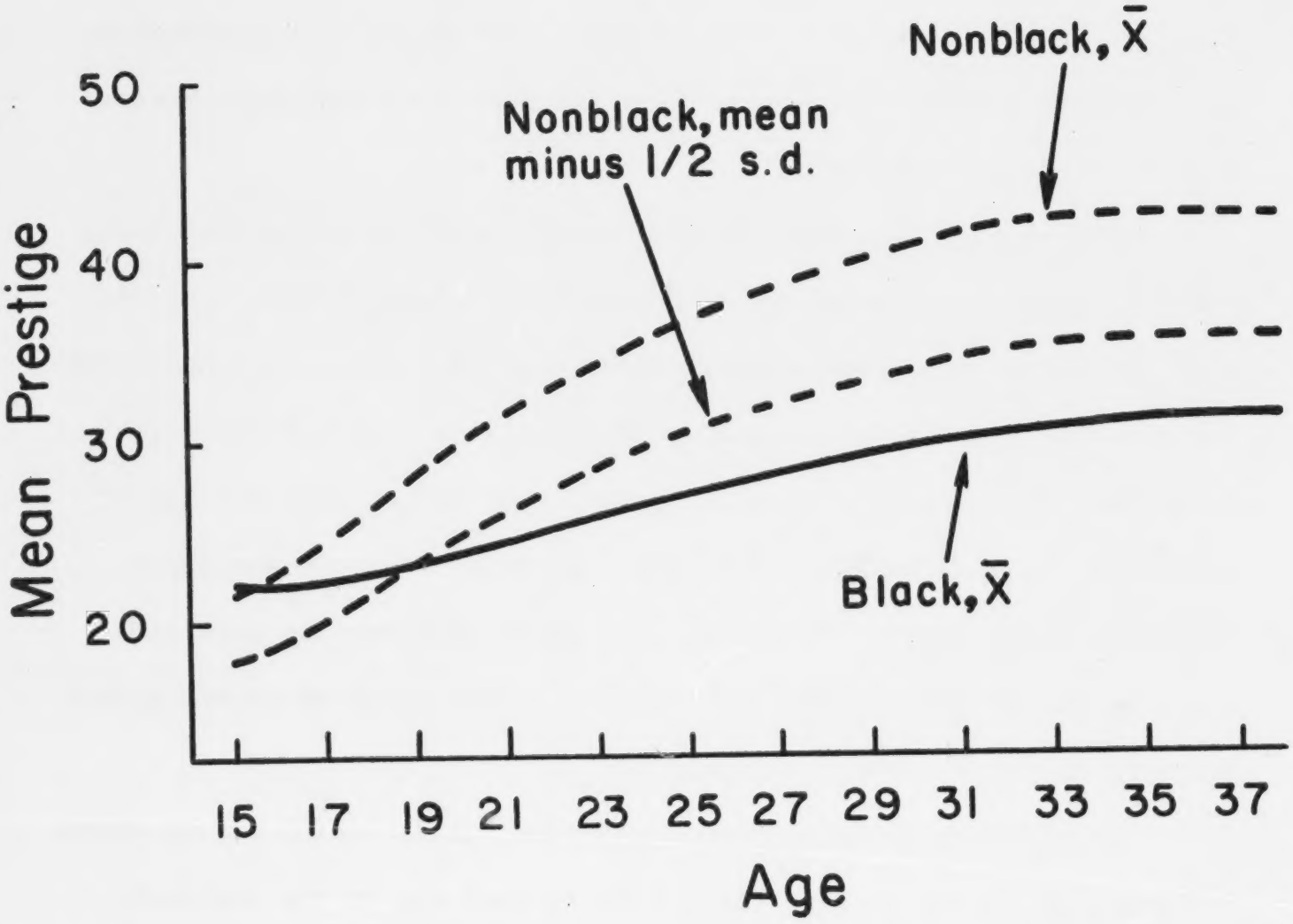

Figure 9. Mean Occupational Prestige, by Age, for Black and Nonblack Men.

percentile of the nonblack distribution until age 32. The data presented in Table 3 indicates, for each age, precisely what percentage of nonblacks is below the median prestige of blacks. In these terms, the black position is considerably worse in occupational prestige than in income, as a comparison with Table 2 shows. From age 23 on, the black median is at the 20th percentile of the white distribution, while it never drops that low, even at age 37, in income.

Further insight into the sources of this difference can be obtained by examining separately the growth in occupational prestige of each educational group. This is shown in Figure 10, which for occupational prestige is analogous to Figure 2 for income.[20] In Figure 10, each of the curves constitutes a group which enters the labor force approximately at the same age. Thus each curve is more nearly a pure measure of the growth in an individual's occupational prestige through his career than is the single curve for nonblacks and the single curve for blacks in Figure 9.

The reason for the lower position of blacks in occupational prestige than in income is not immediately apparent from comparison of Figures 2 and 10. In fact, these figures suggest that the reverse should be true; blacks are closer in occupational prestige than in income to nonblacks with equal education (compared to the distances in prestige or income between groups of the same race but of differing education). However, on closer examination, it is evident that this is precisely the reason that blacks are farther behind in prestige than in income. The number of blacks with high educational levels is lower than the

Table 3. Percentile Position of the Median Black Prestige on the Nonblack Percentage Distribution, by Age

Age	Percentile of Black Median on Nonblack Prestige Distribution	Black Median Prestige
17	48.7	18.4
18	36.3	18.4
19	30.3	19.4
20	27.9	20.0
21	25.2	21.5
22	24.9	21.7
23	20.2	22.9
24	23.3	24.6
25	19.7	24.8
26	19.3	25.9
27	19.5	27.1
28	19.3	27.3
29	19.4	28.0
30	18.9	28.1
31	20.7	28.6
32	20.4	29.2
33	20.7	29.8
34	20.9	29.9
35	19.3	30.4
36	20.4	31.6
37	18.5	29.8
38	17.6	31.2

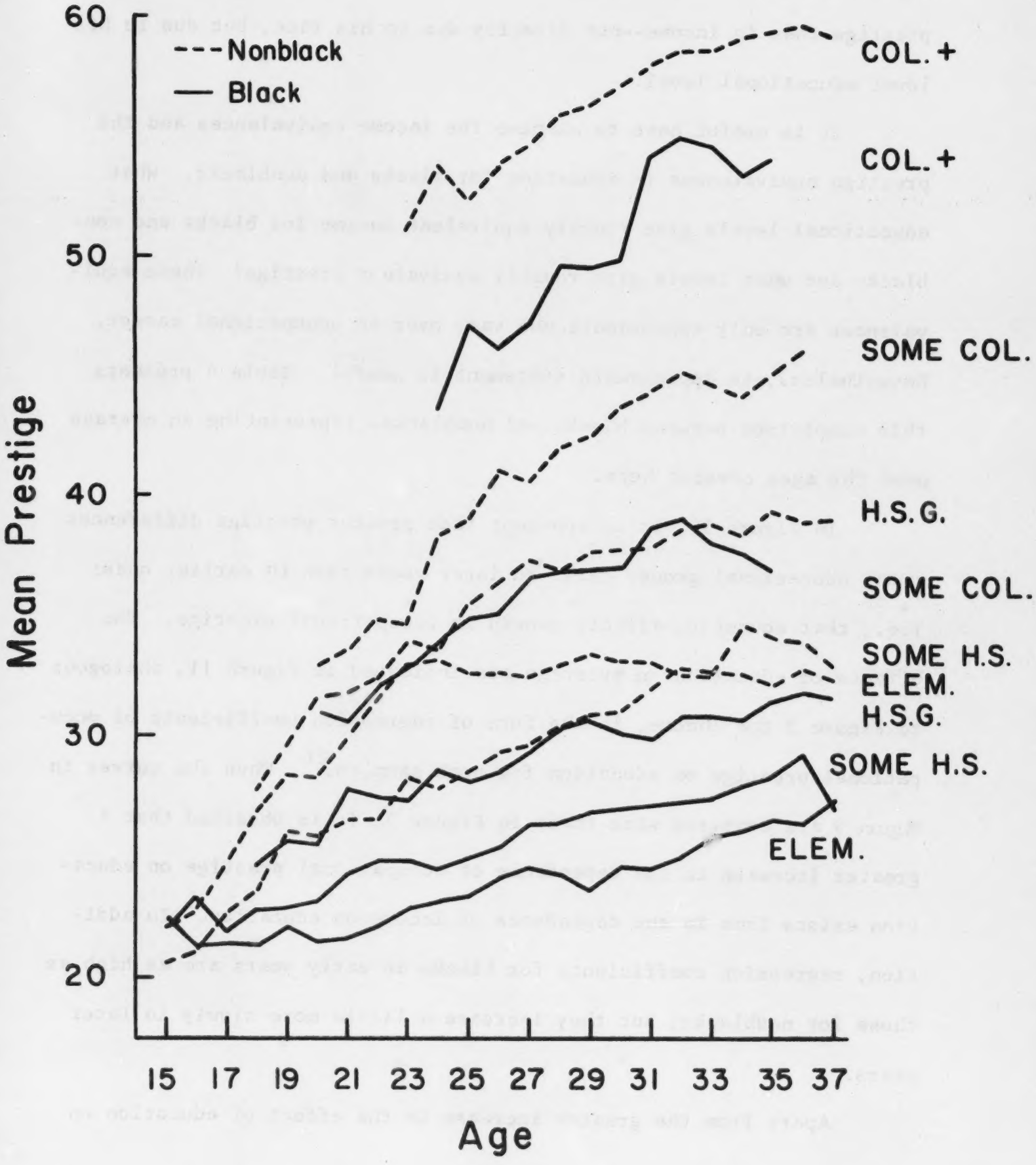

Figure 10. Mean Occupational Prestige, by Educational Attainment at Various Ages, for Black and Nonblack Men.

number of nonblacks--thus the greater dependence of occupational prestige on education means that the average black is farther behind in prestige than in income--not directly due to his race, but due to his lower educational level.

It is useful here to examine the income equivalences and the prestige equivalences in education for blacks and nonblacks. What educational levels give roughly equivalent income for blacks and nonblacks and what levels give roughly equivalent prestige? These equivalences are only approximate and vary over an occupational career. Nevertheless, an approximate statement is useful. Table 4 presents this comparison between blacks and nonblacks, representing an average over the ages covered here.

In Figure 10, it is apparent that greater prestige differences among educational groups exist in later years than in earlier ones; i.e., that education affects growth in occupational prestige. The effects of education on prestige are indicated in Figure 11, analogous to Figure 3 for income, in the form of regression coefficients of occupational prestige on education for both samples.[21] When the curves in Figure 9 are compared with those in Figure 3, it is observed that a greater increase in the dependence of occupational prestige on education exists than in the dependence of income on education. In addition, regression coefficients for blacks in early years are as high as those for nonblacks; but they increase a little more slowly in later years.

Apart from the greater increase in the effect of education on

Table 4. Comparison of Educational Attainments Between Blacks and Nonblacks at Similar Income and Prestige Levels

PRESTIGE LEVEL	BLACK	NONBLACK
high		.....College graduate
	College graduate.....	
		.....Some college
	Some college.....	High school graduate
		.....Some high school
	High school graduate.....	Elementary school graduate (or less)
	Some high school.....	
low	Elementary school..... graduate (or less)	

INCOME LEVEL		
high		.....College graduate
	College graduate....	Some college
		.....High school graduate
	Some college.....	Some high school
	High school ..... graduate	Elementary school graduate (or less)
	Some high school.....	
low	Elementary school..... graduate (or less)	

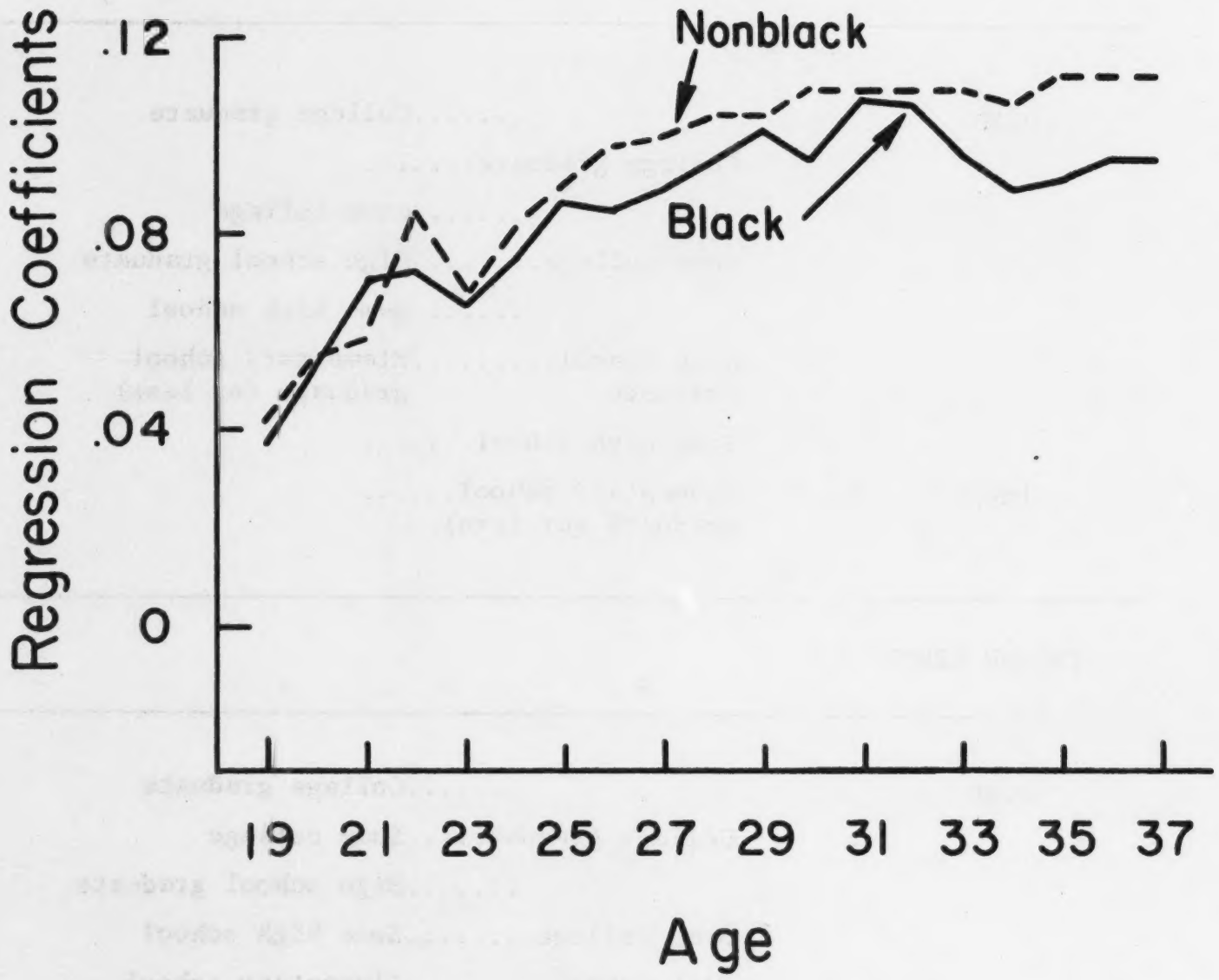

Figure 11. Regression Coefficients from Regressions of Respondent's Prestige (log) on Education, by Age, for Black and Nonblack Men.

prestige than on income, the overall level of effect of education on prestige is higher than its effect on income. This cannot be seen from the raw regression coefficients, but only with standardized coefficients; for both blacks and nonblacks, the standardized coefficients for prestige are consistently higher than those for income, averaging about twice as high.

In examining the effect of education on income, the distinction was made between an initial effect in establishing differential levels and a continuing effect on income growth. Whether these two effects differ for blacks and nonblacks in prestige are questions that can be raised here. To do this, it is useful to examine, as with income, the structural equation showing the change in occupational prestige as a function of education. If occupational prestige is denoted by P and education by E, this differential equation is:

$$\frac{d \log P}{dt} = a_1 + b_1 \log P + b_2 E \qquad (2)$$

Using the regression coefficients when occupational prestige at age N is regressed on prestige at age N-1 and on education at age N, average coefficients b_1 and b_2 were calculated from age 17 to 37 for blacks and nonblacks. (There is a trend with age, but since the trends are alike for blacks and nonblacks, an average can be used without being misleading.)[22]

The results of these calculations are shown below:

	Blacks	Nonblacks
a	.5393	.6848
b_1	-.1779	-.2157
b_2	.0175	.0245

These results are quite different from those in income. As with income, the effects of education on income growth are of the same order of magnitude, with the effect slightly higher for nonblacks than for blacks. Here, however, the regression toward the mean is higher for nonblacks than for blacks. Occupational prestige is less stable for nonblacks than for blacks, a result exactly opposite to that for income. The difference is evident in a variety of other ways as well, such as comparing the correlation coefficients between adjacent years in income and prestige for blacks and nonblacks, or in comparing standardized regression coefficients. The reason for the difference, however, is not clear. It means that in prestige nonblacks regress toward the mean more than do blacks, and are only held away from it by the continuing effects of education which are slightly greater than for blacks.

As with income, it is instructive to examine what happens to those blacks and nonblacks above and below their respective means. For income, the higher regression effect of blacks was the result of an asymmetry: the high income nonblacks were different from the high income blacks, while the low income blacks and nonblacks showed the same regression effects. It was the greater rise among nonblack high incomes that created the difference.

Here a very different result holds: the higher regression effect of nonblacks is due to a difference between the low-prestige blacks and nonblacks. In Figure 12 it is clear that the low-prestige nonblacks show a much greater tendency to rise (in the early years) than do the

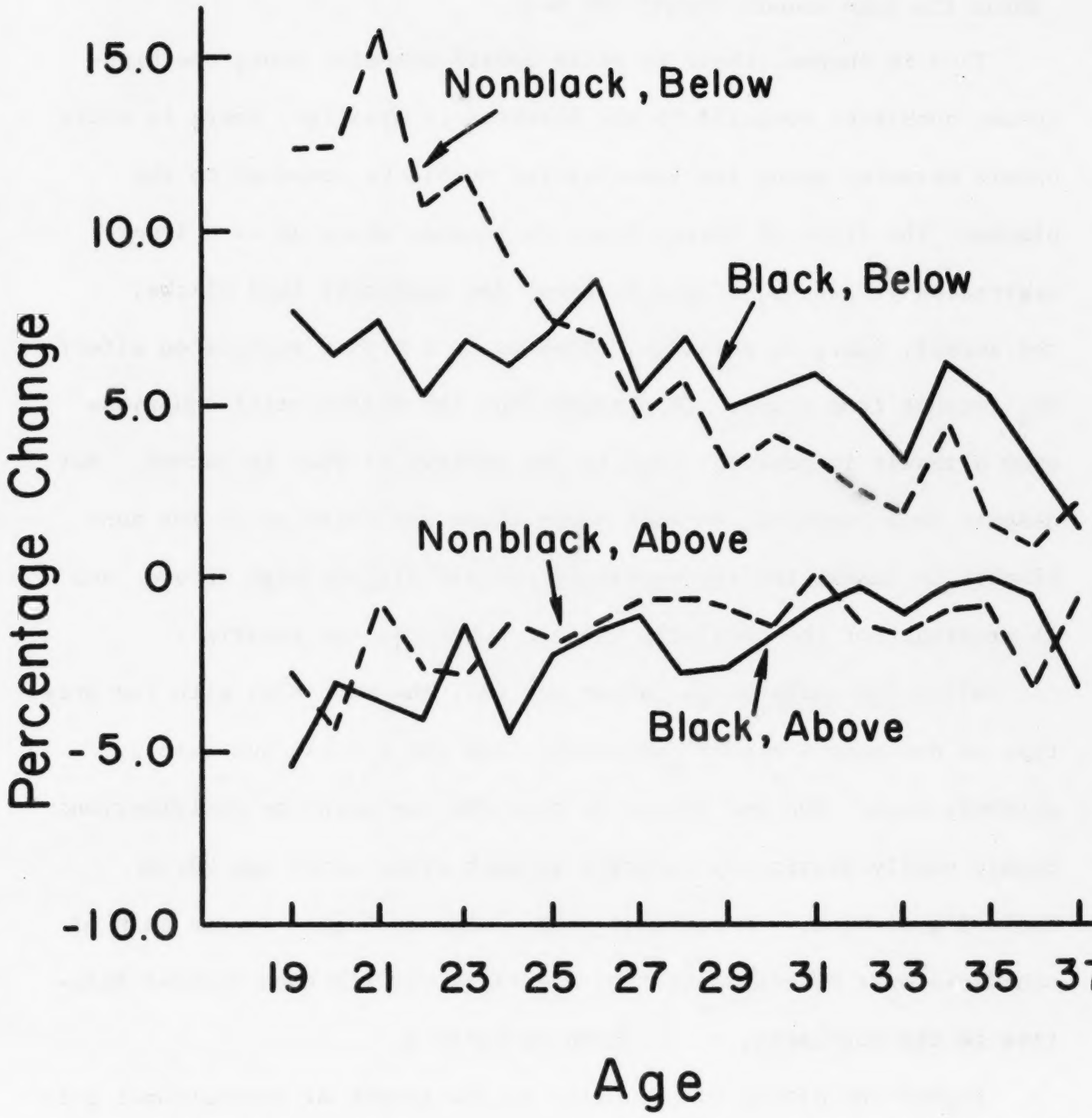

Figure 12. Percentage Change in Occupational Prestige from One Year to the Next for Individuals Classified as Above or Below the Mean the Previous Year, by Age, for Black and Nonblack Men.

low-prestige blacks. The high-prestige blacks and nonblacks regress about the same amount toward the mean.

Thus in income, there is extra upward movement among the high-income nonblacks compared to the blacks. In prestige, there is extra upward movement among the low-prestige nonblacks compared to the blacks. The first of these, i.e., in income, shows up as a lower regression effect (b_1 closer to zero) for nonblacks than blacks; the second, i.e., in prestige, shows up as a higher regression effect (b_1 further from zero). This means that the differential equations show a result in prestige that is the reverse of that in income. But despite this reversal, in both cases there are extra gains for nonblacks: in income, for the nonblacks who are already high income, and in prestige, for the nonblacks who are currently low prestige.

After the early years (about age 26), the nonblacks with low prestige do not gain a higher percentage than the blacks, but rather, slightly less. The end result is that the two prestige distributions remain nearly stationary relative to each other after age 23, as Table 3 indicates. In contrast, the continued higher income gain of nonblacks over blacks means that the black distribution recedes relative to the nonblacks, as is shown by Table 2.

Beyond the effect of education on the growth of occupational prestige, it is possible to examine, as was done for income, the effect of factors in the previous generation: father's occupational prestige, father's education, and mother's education. However, none of these factors shows a relation to occupational prestige great enough to give a standardized regression coefficient as large as 0.1 when the son's

own education is included in the equation. When occupational prestige at age N-1 was included, the regression coefficients (and thus the coefficients b_3, b_4, b_5 in a structural equation like equation (2)) were all reduced to around zero. Thus it appears that none of the factors from the prior generation has a direct effect on the son's occupational prestige. This is in constrast to the result for income, which showed that for blacks, mother's education was related to growth in income apart from the son's own attainment.

Factors in the Prior Generation Affecting Education

In previous sections, the effect of a man's educational level on his income growth and on his growth in occupational prestige was examined. Except for the effect of mother's education on income, background factors from the previous generation showed no direct effect on income or prestige when the man's own education was controlled. What was not examined, however, is the effect of factors in the preceding generation on educational attainment. Three such factors were measured: father's education, mother's education, and prestige of the father's occupation. What is of interest here is both the general effects of these three different factors and their differential effects for blacks and nonblacks. The second of these two questions is especially important in helping answer the puzzle presented by Table 1, which showed the greater transferability of resources from father's occupation to son's for nonblacks than for blacks.

The respondents' highest educational attainment was regressed first upon father's occupational prestige alone. Consistent with the Blau-Duncan result of Table 1, the standardized regression coefficient for nonblacks was considerably larger than that for blacks, .360 to .275. However, when education was regressed instead upon father's education and mother's education, the results indicate a somewhat different process for blacks than for nonblacks (standardized regression coefficients in a bivariate equation):

	Blacks	Nonblacks	Difference (Black - Nonblack)
Father's education	.167	.274	-.107
Mother's educaton	.300	.250	+.050

For nonblacks, mother's and father's education are nearly alike in their apparent effects on son's education; but for blacks, the mother's education is clearly the stronger determinant. When all three variables are included as determinants of the son's education, then the greater importance of the mother's side for the blacks shows up even more fully (standardized regression coefficients in trivariate equation):

	Blacks	Nonblacks	Difference (Black - Nonblack)
Father's prestige	.146	.204	-.058
Father's education	.116	.215	-.099
Mother's education	.290	.214	+.076

This comparison shows clearly that for blacks, fewer of the occupational and educational resources held by the father are transmitted to the son in the form of increased educational attainment. His education is much more dependent upon the resources held by his mother as expressed in her educational level. This means that a table like Table 1, showing the lesser transferability across generations of occupational prestige for blacks than for nonblacks, does not accurately express

the transfer of resources across generations. That table expresses the transfer of resources from father to son; while the transfer is lower for blacks than for nonblacks, it is partly compensated by the greater transfer of resources from mother to son for blacks than for nonblacks.

Summary and Conclusions

The present analysis investigates differences between black and nonblack males in the processes underlying occupational growth. The investigation consists primarily of understanding the degree to which members of the two groups convert educational attainment into occupational returns in the form of income and prestige throughout a significant portion of their occupational careers. Since the emphasis is on growth, a major portion of the analysis is concerned with the ways in which differential levels of occupational prestige or income are maintained or incremented. Finally, although the analysis is largely restricted to the careers of the men themselves, the differential effects of parental resources in determining educational levels were examined.

The analysis shows that the differences between the black and nonblack samples in occupational growth are several. First, the levels attained by blacks are considerably lower than those for nonblacks, both in income and prestige. These lower levels are principally a result of lower growth rates of income and prestige, rather than substantially lower starting points.

Blacks are considerably less well off in occupational prestige than in income compared to nonblacks. This difference is not, however, the result of greater difference of occupational prestige between nonblacks and blacks within homogeneous educatonal groups. Rather, it is due to the greater differences in occupational prestige between educational groups, coupled with the lower education levels of blacks.

The processes of growth in income and in occupational prestige over a career are somewhat different from one another and different for blacks and nonblacks. For income growth, there is a relatively small continuous effect of education on income, slightly smaller for blacks than for nonblacks. However, for blacks the positive effects of education are eroded by the unmeasured factors which make high incomes less stable than for nonblacks, and lead them to regress back toward a mean. The overall effect is an increase in nonblack income relative to black, a reduction in overlap of the two income distributions. The process underlying growth of occupational prestige is somewhat different. First, the continuing effects of educational levels are somewhat larger; again, these effects are slightly greater for nonblacks than for blacks. However, occupational prestige of blacks is more stable than that of nonblacks. The greater effect of education and the greater regression effect seem to balance each other, with the result that the black and nonblack distributions of prestige remain in the same relative position.

The direct effects of factors from the preceding generation, on both income and prestige growth, are minimal when the respondent's own education is controlled. Most important are the direct effects of mother's education on income--an effect which for blacks continues throughout the portion of the career measured by the study. This leads to the next question: what are the indirect effects of parental resources on occupational growth through the son's education? The analysis shows that father's education, father's occupation, and mother's

education all show independent effects on the son's education. However, for blacks, mother's education is of greater importance than the other two background characterisitcs, while among nonblacks, the three characteristics are of approximately equal weight.

APPENDIX A

Methodological Background

The present analysis is limited to an examination of six variables. Father's education, mother's education and father's prestige are taken to be the respondent's background characteristics, and their values were ascertained as responses to direct questions. Parental educational attainment is assumed to have been completed prior to the respondent's adolescence. Father's occupation pertains to the time the respondent was fourteen years old.

The three remaining variables, respondent's education, occupation, and income are available from the continuous life history portion of the study. Procedures used to collect this data and its processing have been discussed elsewhere.[23] Here we will restrict ourselves only to a discussion of the scaling and scoring of these variables as they pertain to this analysis and some of the assumptions and simplifications we have made.

Although respondents reported parental education in terms of years completed or specific education credentials, we have scored these values in the following way:

0: Less than four years of schooling

1: Elementary, four to seven years

2: Elementary, eight years

3: High school, one to three years

4: High school graduate

5: Post-high school, vocational, etc.[24]

6: College, one to three years

7: Bachelor's degree or four years college

8: College, five years or more

This scoring scheme is also used for the respondent's education. In the discussion of respondent's education, however, and his occupational status as well, a definition of 'age' is important. Education at a given age is to be interpreted as the education completed prior to the respondent's birth month.

In addition, respondent's educational attainment is credited to his account regardless of the type of educational system in which it was obtained. Thus, the respondent who completed his high school education during military service is not distinguished from the 'conventional graduate.'

In scaling occupations, we used the comprehensive list of prestige scores recently developed as a result of studies conducted by the National Opinion Research Center.[25] These scores are available for all detailed census occupational titles. As noted above, the prestige rating assigned to the respondent's father refers to the occupation held by the father at the respondent's age 14. In the case of the respondent, the procedure needs some explanation. As with education, 'age' is taken to be the respondent's month of birth. In the case of education, once a level of attainment is reached, retrogression is not possible and a score can be assigned to the respondent at any point in his life. Prestige at 'age N' is somewhat different. First, in this analysis we use the prestige score of the full-time occupation held by the respondent

during the specific birth month in question. Thus, a respondent who was not working at the time appears as a missing observation. The prestige may be slightly biased, at the early ages, towards respondents whose birthdays occur during the summer months. Inconsistencies in some cases are the result of not differentiating between high school drop-outs who have permanently entered the labor-force and those respondents who are working during the summer between academic years.

The time points at which these characteristics are measured give the temporal order of the variables. For example, parental characteristics all refer to a time prior to the completion of the respondent's education;[26] and the respondent's education at age N was attained prior to the time at which we are measuring his occupational status.

The sixth variable in this analysis, income, is measured in a slightly more complex manner. In the life histories, respondents were asked to give starting and ending wages, appropriate time units for these wages (weekly, hourly, etc.) and the average number of hours worked/week for every job starting at age 14. Since our focus was on occupational states and not on employers, wages are recorded at status transitions whether they involve a change of employer or not. In distinguishing between full and part-time employment, we used the usual census definitions and all multiple job-holding was recorded.

First, all income was converted to $/month. In those cases where hours were not reported, mean hours were estimated from the Department of Labor statistics. In calculating monthly income, linear interpolation was used between starting and ending wages. The basic data, then,

consists of a monthly income record, for all periods of full and part-time employment for each respondent. The analysis is restricted to monetary wages.

The present analysis also excludes observations for given 'age-years' in which the respondent reported labor-force participation for 4 months or less. The rationale for this is based on two assumptions: first, at the earlier ages, periods of full-time employment which intervene between academic years are not representative of an individual's earning capabilities or potential. Second, at later stages of the life-cycle, such short periods (in a given 'age year') should not be inflated to a yearly income figure. Thus, the respondent who worked every summer during high-school and college would not enter this analysis until after college graduation.

We have, however, made the assumption that if income is known for most of a given 'age year,' it is reasonable to calculate the rate of full-time earnings on the basis of the rate for the known months. Thus, if a respondent entered the labor force 2 months after his 21st birthday and reported wages for the following 10 months, his 'yearly' full-time earnings were calculated at the rate of earnings during ten months.

At every age, a fraction of the sample who were in the labor-force for more than four months but who did not recall or report their wages is lost. The extent of missing data in the present analysis is presented in Table A.1. We should also note that if the respondent held more than one full-time job during a given period of time, wages

Table A.1. Percentage of Respondents for Whom Income is Unknown, by Race and Educational Attainment

Age	Elementary School Graduate (or Less)		Some High School		High School Graduate		Some College		College Graduate	
	Black	Nonbl.	Black	Nonbl.	Black	Nonbl.	Black	Nonbl.	Black	Nonbl.
15	30.3	30.0	25.4	27.1	-	-	-	-	-	-
17	24.8	21.3	14.2	16.7	0.0	26.7	-	-	-	-
19	16.4	16.7	9.9	9.2	5.2	10,7	5.6	5.9	-	-
21	12.0	12.6	7.7	6.7	7.0	9.0	7.7	4.8	-	-
23	8.1	8.7	6.6	10.6	5.3	11.0	5.4	4.9	0.0	2.7
25	6.5	11.9	7.2	8.5	4.4	9.0	7.4	10.4	4.2	3.3
27	6.6	10.8	8.5	6.1	4.5	8.8	5.6	8.3	8.8	8.0
29	8.3	8.9	7.0	7.1	6.1	8.1	5.2	12.0	5.0	4.9
31	8.2	11.8	5.3	6.5	6.4	7.6	5.9	8.8	7.9	5.5
33	7.8	8.2	2.9	7.1	6.6	6.4	3.3	9.1	6.1	5.0
35	7.2	5.5	4.7	5.2	1.3	4.6	5.0	8.1	8.7	8.0
37	6.7	9.1	4.8	3.2	0.0	5.1	14.3	0.0	9.1	4.3
Case Bases for Percentages*										
15	109	90	59	48	-	-	-	-	-	-
17	153	108	155	162	17	15	-	-	-	-
19	171	102	193	130	96	215	18	34	-	-
21	166	95	181	105	114	212	26	62	-	-
23	161	104	196	113	171	282	37	82	12	37
25	169	109	208	117	183	312	54	106	24	90
27	166	111	212	114	198	319	54	109	34	113
29	168	112	213	112	197	322	58	100	40	144
31	158	102	189	107	171	275	51	80	38	146
33	129	85	140	84	122	204	30	55	33	120
35	97	55	85	58	75	151	20	37	23	87
37	60	33	42	31	41	99	14	22	11	47

*Number of respondents, within the black and nonblack samples, who reported labor-force participation for five months or more.

from both are included. Those 'age years,' however, in which the respondent's major source of income was part-time employment were excluded from analysis.

Finally, the analysis uses a constant dollar purchasing value of $1.00 during the period 1957-1959.

APPENDIX B

Additional Tables

Table B.1 Mean Yearly Income in Constant Dollars, by Age, for Black and Nonblack Men

Age	Black			Nonblack			Ratio
	Mean	Standard Deviation	N	Mean	Standard Deviation	N	Black / Nonblack
15	2256	2092	121	2353	1677	89	.959
16	2321	1814	191	2727	2008	168	.851
17	2462	1590	265	2801	1492	232	.879
18	2668	1565	356	3261	2167	407	.818
19	2964	1547	425	3548	2175	428	.835
20	3076	1575	447	3618	2187	421	.850
21	3219	1674	449	3838	2161	436	.839
22	3435	1579	497	4178	2218	493	.822
23	3640	1696	541	4349	2292	561	.837
24	3813	1741	576	4573	2317	611	.834
25	3966	1743	600	4814	2325	670	.824
26	4133	1763	611	5096	2483	685	.811
27	4296	1776	620	5248	2527	702	.819
28	4390	1827	623	5565	2751	711	.789
29	4512	1936	626	5802	2769	728	.778
30	4687	1875	609	6076	2852	723	.771
31	4805	1937	568	6237	3014	656	.770
32	4918	2087	494	6473	3238	589	.760
33	5030	2168	429	6783	3445	512	.742
34	5128	2127	372	7076	3657	453	.725
35	5187	1985	285	7234	3662	366	.717
36	5300	2100	222	7184	3464	288	.738
37	5269	1883	159	7414	3644	222	.711
38	5290	1877	102	8111	4232	142	.652
39	5642	2175	36	8811	5282	55	.640

Table B.2 Mean Yearly Income in Constant Dollars, by Educational Attainment at Various Ages, for Black and Nonblack Men

Age	Black					Nonblack				
	Education (Years)									
	0-8	9-11	12	13-15	16+	0-8	9-11	12	13-15	16+
15	2,116	2,468				1,994	2,811			
16	2,287	2,380				2,148	3,221			
17	2,450	2,420				2,489	2,960			
18	2,499	2,637	3,122			3,024	3,423	3,237	2,793*	
19	2,735	2,930	3,204	3,953*		3,200	3,760	3,578	3,500*	
20	3,783	3,067	3,345	3,739*		3,239	3,715	3,709	3,698	
21	2,838	3,221	3,467	4,008*		3,222	3,980	4,001	3,947	
22	2,979	3,479	3,646	4,158	4,488*	3,821	4,216	4,261	4,276	4,238*
23	3,097	3,634	3,872	4,646	4,442*	3,904	4,279	4,541	4,446	4,161
24	3,185	3,708	4,117	4,260	4,165*	3,595	4,383	4,569	4,665	4,287
25	3,403	3,853	4,242	4,708	5,117*	4,184	4,785	4,956	4,941	4,948
26	3,515	4,049	4,420	4,624	5,345*	4,389	5,216	5,163	5,197	5,373
27	3,708	4,207	4,580	4,765	5,284	4,499	4,918	5,416	5,407	5,682
28	3,675	4,331	4,672	5,036	5,580	4,486	5,123	5,825	5,782	6,034
29	3,717	4,469	4,744	5,271	5,885	4,515	5,282	6,031	6,059	6,504
30	3,912	4,576	5,039	5,275	6,027	4,690	5,418	6,174	6,470	7,068
31	4,050	4,647	5,085	5,535	6,454	4,791	5,588	6,319	6,244	7,508
32	4,252	4,651	5,178	5,782	6,694	4,975	5,714	6,339	6,515	8,235
33	4,452	4,743	5,260	5,641*	7,100	5,147	6,082	6,487	7,198	8,720
34	4,505	4,731	5,527	5,561*	7,567*	5,385	6,168	6,627	7,702	9,586
35	4,658	4,669	5,565	5,816*	7,557*	5,706	6,213	6,718	7,791	9,653
36	4,626	4,741	5,816	6,329*	7,611*	6,268	6,042	6,510	8,352*	9,377
37	4,688	4,915	5,712	6,083*	7,140*	5,843	6,573	6,976	8,118*	9,634
38	4,600	5,020	6,186*	5,825*	7,540*	7,020*	6,944*	7,023	10,120*	10,548

*Mean based on less than 30 cases.

Table B.3 Mean Occupational Prestige, by Age, for Black and Nonblack Men

Age	Black			Nonblack		
	Mean	Standard Deviation	N	Mean	Standard Deviation	N
15	22.3	8.0	133	21.5	7.0	136
16	22.1	7.5	210	22.1	6.9	203
17	21.8	7.1	286	24.1	8.7	281
18	22.5	7.2	368	26.3	9.2	378
19	23.3	7.7	438	28.8	10.1	475
20	23.6	7.9	468	30.0	10.7	471
21	24.6	8.7	474	30.8	10.6	444
22	25.2	9.2	475	32.5	12.1	483
23	25.7	9.4	529	34.0	12.1	558
24	26.5	9.5	571	34.7	12.5	630
25	27.0	10.1	594	36.3	12.9	699
26	27.7	10.5	628	37.8	13.2	736
27	28.7	11.2	643	38.6	13.4	760
28	29.0	11.6	660	39.2	13.8	779
29	29.3	11.5	648	40.2	14.1	795
30	29.4	11.6	656	40.5	14.4	795
31	29.8	12.1	613	41.2	14.7	740
32	30.3	12.6	554	41.7	14.6	661
33	30.6	12.6	473	41.9	14.6	582
34	30.6	12.5	413	42,0	14.5	512
35	31.0	12.9	327	42.8	14.6	420
36	31.5	12.8	250	42.4	14.4	347
37	31.3	13.2	189	41.8	14.2	265
38	31,4	12.6	126	42.7	13.9	175
39	29.5	12.2	58	42.6	12.7	92

Table B.4 Mean Occupational Prestige, by Educational Attainment at Various Ages, for Black and Nonblack Men

Age	Black					Nonblack				
	Education (Years)									
	0-8	9-11	12	13-15	16+	0-8	9-11	12	13-15	16+
15	22.5	22.1				20.7	22.1			
16	21.3	23.4				21.2	22.8			
17	21.4	21.9				22.7	24.2			
18	21.2	22.8	24.5			23.6	26.9	27.9	25.7*	
19	22.1	22.9	25.7	26.4*		26.1	28.4	29.7	31.4	
20	21.5	23.2	25.5	31.0*		25.9	28.3	31.7	32.9	
21	21.6	24.3	27.8	30.1*		26.6	29.8	31.8	33.6	
22	22.1	24.8	27.5	32.1*	51.6*	26.6	31.6	32.5	34.9	53.2*
23	22.8	24.8	27.4	32.9*	47.4*	28.3	33.0	33.9	34.7	51.2
24	23.2	24.5	28.7	34.0	43.6*	27.8	33.2	33.5	38.3	53.8
25	23.3	25.0	28.2	34.9	47.2*	28.6	32.6	35.5	39.0	52.3
26	24.1	25.4	28.5	35.2	46.2*	29.4	32.6	36.5	41.0	53.8
27	24.6	26.4	29.3	36.6	47.2	29.7	32.5	37.3	40.6	54.7
28	24.3	26.4	30.3	36.8	49.6	30.4	33.0	36.9	42.0	55.9
29	23.7	26.9	30.7	36.9	49.5	30.9	33.4	37.7	42.5	56.3
30	24.6	27.0	30.1	37.0	49.8	31.0	33.1	37.8	43.8	57.1
31	24.5	27.2	29.8	38.7	54.1	32.0	33.1	37.8	44.3	58.0
32	25.0	27.3	30.8	39.0	54.9	32.8	32.5	38.6	45.2	58.6
33	25.8	27.5	30.8	38.0	54.6	32.7	32.5	38.8	44.7	58.6
34	26.1	28.0	30.7	37.6*	53.4*	32.6	34.5	38.3	44.2	59.2
35	26.6	28.3	31.5	36.9*	54.1*	32.2	34.1	39.4	45.0	59.4
36	26.4	29.3	31.8	39.5*	52.8*	32.8	33.9	39.0	46.2	59.7
37	27.6	27.0	31.6	41.0*	56.8*	32.4	32.9	39.1	44.9*	58.9
38	27.5	27.8	33.2	40.2*	53.2*	31.3*	32.2*	40.5	48.6*	58.0

*Mean based on less than 30 cases.

FOOTNOTES

[1]For a theoretical discussion of black resource deficits and assets, see Coleman (1969).

[2]Studies currently being conducted by Herbert S. Parnes, the Center for Human Resources Research, Ohio State University, are the first major attempts to conduct longitudinal studies of labor market experience for subsets of the United States population: men 45-59 years of age, women 30-44 years of age, and young men and women 14-24 years of age. Members of each subset are being surveyed annually for a five-year period, a total of six surveys per group (Parnes et al., 1968, 1969).

Another set of data which is longitudinal in nature consists of the Continuous Work History Tapes of the Social Security Administration. A number of studies, e.g. Blumen, Kogan and McCarthy (1955), Gallaway (1965, 1967), have utilized this information. From the perspective of studying occupational mobility, however, this data is quite limited. Most critically, while individual income and indusrial information are available, occupation and education of the respondents are not.

[3]A number of sociologists have attempted to study career patterns for special samples of the population. Examples of this type of analysis exist in the work of Form and Miller (1949), Lipset and Bendix (1952a, 1952b), Bendix, Lipset and Malm (1954), and Wilensky (1960, 1961). In general, however, this research has not utilized the longitudinal nature of the data.

[4]For a discussion of trends in education, see B. Duncan (1968).

[5]The universe of the two samples of this study are the total populations of black and nonblack males 30-39 years of age, in 1968, residing in households in the United States. Individuals in the sample were selected by standard multi-state area probability methods. The execution of the sample design consisted of two parts: (A) A national sample, designed to yield the required number of nonblack eligibles plus a number of eliglible blacks proportional to their representation in the population as a whole; and (B) A supplementary selection of black households only, designed to supply the additional eligible blacks required to satisfy the design. The black sample consists of blacks interviewed in the National sample and blacks interviewed in the supplementary sample. Only individuals normally classified by the Census as Negroes are included in what we are calling the black sample. In each sample, selection was made so that each person in the universe had an equal probability of being interviewed.

The analysis is based on 1589 cases: 738 blacks and 851 nonblacks. The overall completion rate for the study was 76.1% for Sample A and 78.2% for Sample B.

[6]Blum (1970).

[7]It should be noted that with rare exceptions, major studies of occupational mobility in sociology have not focused on income. In part this is the result of the difficulty of collecting income data; in part the result of the sociologists' concern with prestige or status mobility.

[8]Hodge, Siegel and Rossi (1966), Inkeles and Rossi (1956), Hodge, Treiman and Rossi (1966), and Treiman (1967).

[9]The earliest quantitative study of the prestige of occupations was conducted by Counts (1925) in the 1920's.

[10]Rossi, Hodge and Siegel (1970, forthcoming).

[11]Prestige is scored from the Rossi, Hodge and Siegel (op cit.) research. Income is measured as rate of full-time earnings during a given year for the period in that year during which the respondent was in the labor force. Throughout the analysis, income is reported in constant dollars (purchasing value of $1.00 during the period 1957-59). Further details of scaling and scoring are to be found in in Part II.

[12]The appropriate comparison for quantities like incomes, which have a lognormal distribution, is a ratio. It should be noted the ratios cited here are not comparable with cross-sectional data available in other sources. The emphasis here is on age and not on calendar time; thus, men in the sample were 15 between 1944-53, 16 between 1945-54, etc. In addition, most published statistics citing black/nonblack ratios refer to family income or total earnings from all sources; the present analysis is restricted to full-time wage and salary earnings.

[13]Table B.1, Appendix B, contains the data used to draw this graph.

[14]The percent of nonblacks above the black mean income would be more accurately expressed by this line if the distribution of income were normal, rather than lognormal. Despite deviation from normality, the relationship expressed here is approximately true.

[15]Table B.2, Appendix B, contains the data used to draw this graph.

[16]The natural log of income is used throughout the regression analysis.

[17]The coefficients for education show that starting with age 23 (as with Figure 3), the nonblack sample has a regular increase in regression coefficients. The black sample shows a somewhat steeper decline than was evident in Figure 3. These patterns, which are consistent with those shown in Figure 3, further confirm the indication that education appears to have, for blacks, its major effect in establishing initial income levels.

[18]These estimates are obtained by using the average of the regression coefficients for ages 17-37. The procedure for obtaining estimates of coefficients in the differential equation from the regression coefficients may be found in Coleman (1968).

The linear regressions reported in this paper were performed using a computer program which calculates all correlations on the basis of the maximum number of cases for which values on any pair of variables are present, i.e., a pair-wise present program. Since such a procedure produces zero-order correlations within a large matrix based on slightly different subsets of the overall sample, some inconsistencies may arise. Consequently, we have also estimated coefficients in the differential equation using regressions based on only the cases for which information was available for the three variables which enter into the linear regression for that age. Estimates for Equation (1) using this approach are given below:

	Blacks	Nonblacks
a	1.6854	.9525
b_1	-.2081	-.1104
b_2	.0194	.0137

A comparison with estimates reported on p. 24 shows that the values are nearly the same.

[19]Table B.3, Appendix B, contains the data used to draw these curves.

[20]Table B.4, Appendix B, contains the data used to draw these curves.

[21]The natural log of prestige is utilized throughout the following regressions. Prestige, like income, is approximately log-normally distributed, dictating this transformation.

[22]As was the case with estimates for Equation (1), an alternative calculation using the method described in Footnote 18 was also performed here. These coefficients are given below:

	Blacks	Nonblacks
a	.5006	.6410
b_1	-.1662	-.1961
b_2	.0157	.0198

[23]Blum, Karweit and Sørensen (1969).

[24]Used only if a high school diploma was previously attained.

[25]Rossi, Hodge, Siegel (1970, forthcoming).

[26]Very few of these respondents had left full-time education, never to obtain additional schooling prior to age 14.

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